



CF-35 Lightning II

Canada's Next Generation Fighter



F-35 Lightning II

The Centerpiece for 21st Century Global Security



July 9, 2013

Keith P. Knotts
F-35 Business Development - Canada



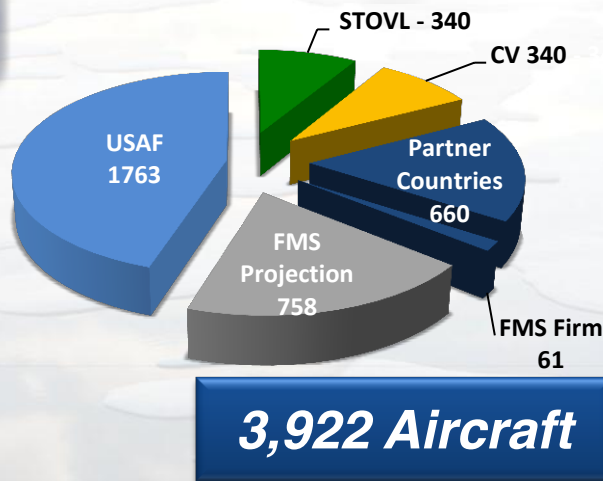
F-35 Value Proposition



An Effective Coalition



Economies of Scale



Counters Current and Future Threats



Advanced Stealth

Internal Fuel Tanks

Fixed Array Radar

Engine Inlets

Full Line-of-Sight Blockage

Aligned Edges

Embedded Antennas

Reduced Signature Nozzles

Internal Stores Carriage

**Low Observable
Seams, RAM Seals**

**Low-Emission Radar
and Avionics**

**Curved Diverterless Inlets,
“Buried” Engine**

Composite Structure

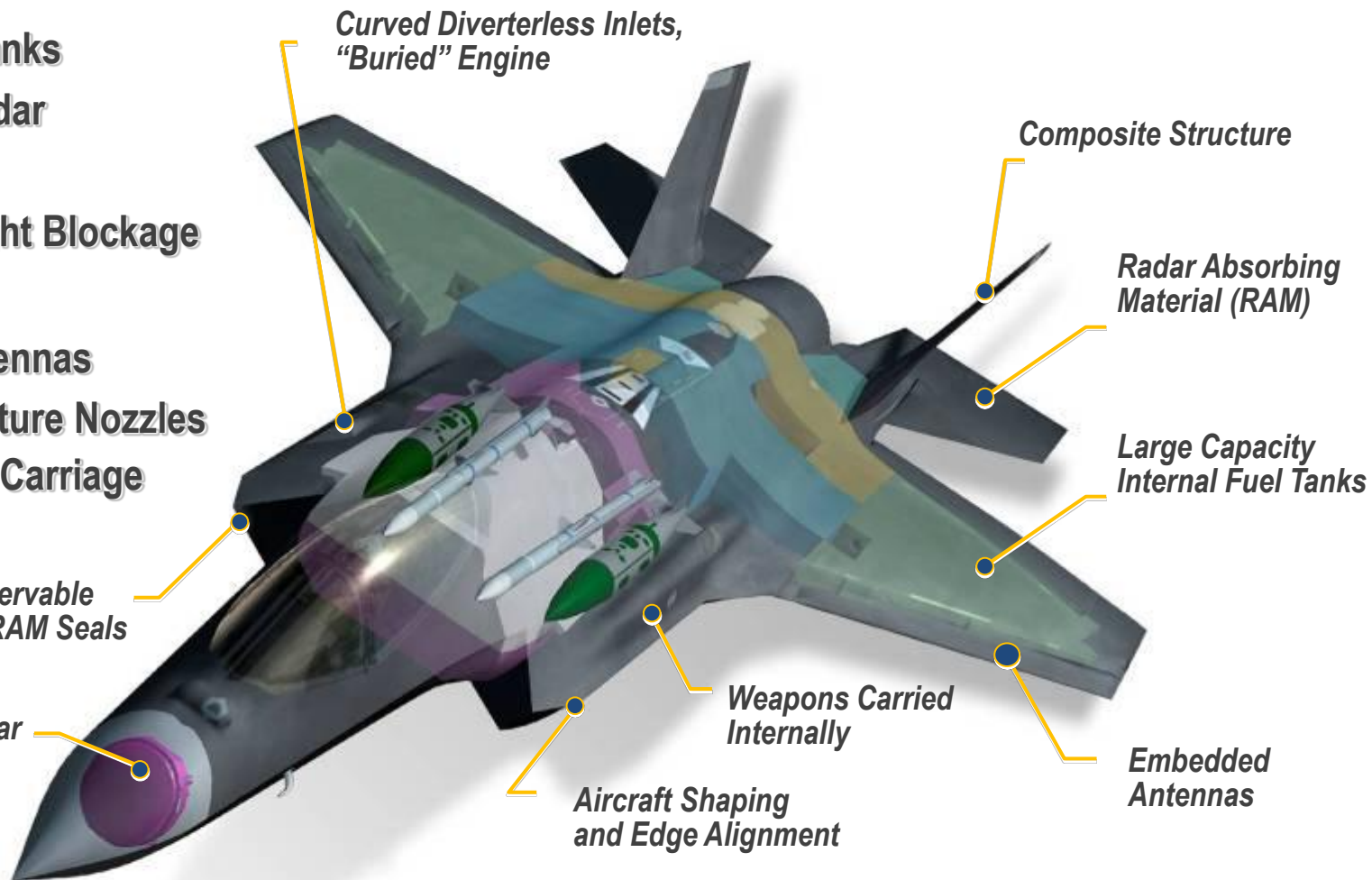
**Radar Absorbing
Material (RAM)**

**Large Capacity
Internal Fuel Tanks**

**Weapons Carried
Internally**

**Aircraft Shaping
and Edge Alignment**

**Embedded
Antennas**



Fundamental 5TH Gen Design Features Can Not Be Retrofitted

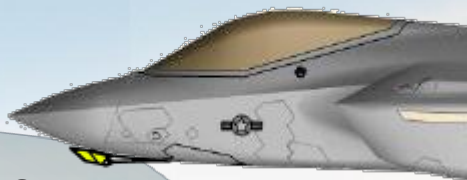
F-35 Reach and Persistence



Greater than 700nm Radius in Both A-A and A-G Configurations

F-35 Mission Systems Coverage

AESA/DAS/RWR/EOTS – All Integral to the Aircraft (No Pods)



Electro-Optical Targeting System

Active Electronically Scanned Array (AESA)

Electronic Support Measures

Network Connectivity

- Data Links
- SINCGARS
- Have Quick
- MADL

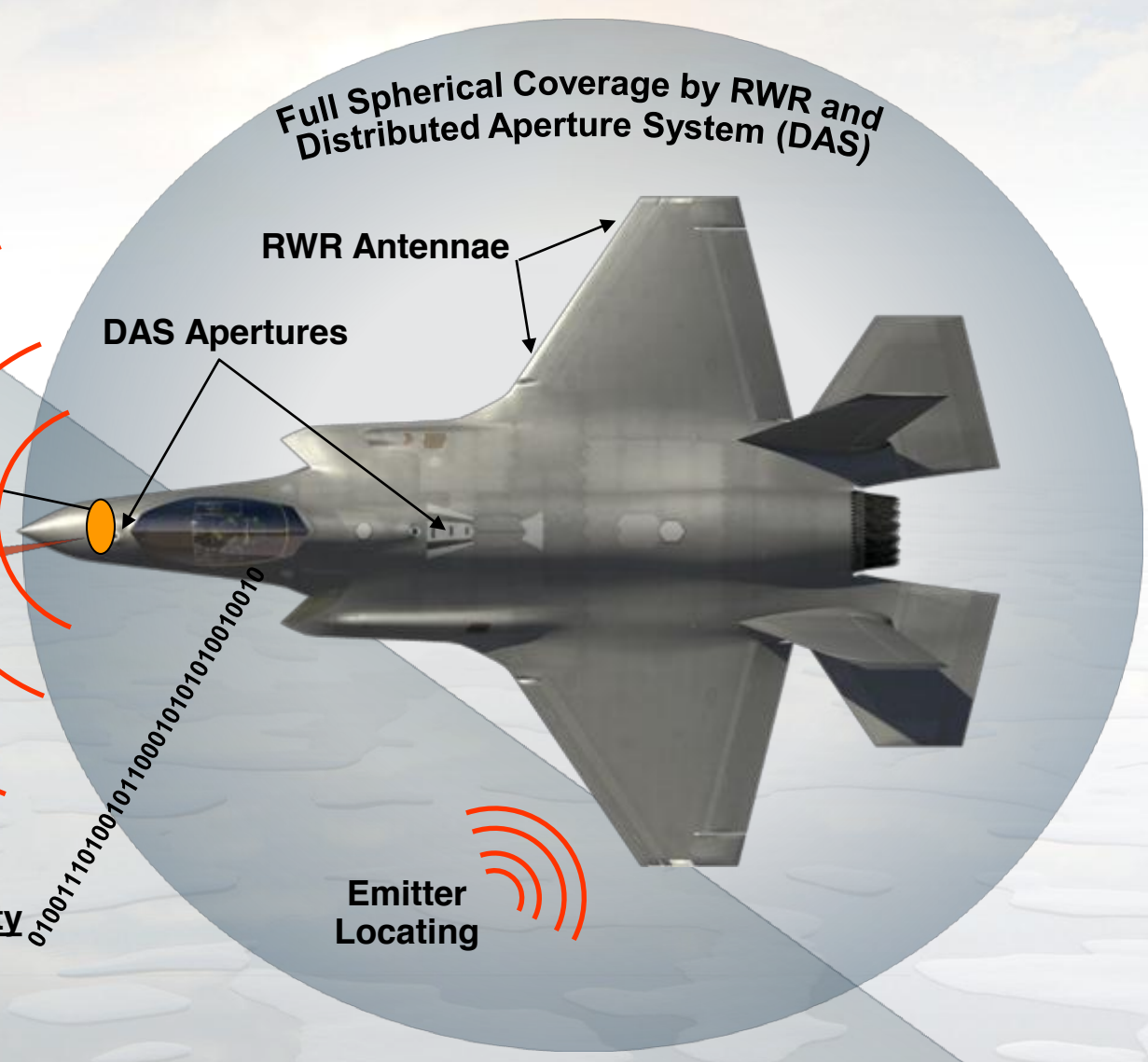
01001110100101100010101010010010

Full Spherical Coverage by RWR and Distributed Aperture System (DAS)

RWR Antennae

DAS Apertures

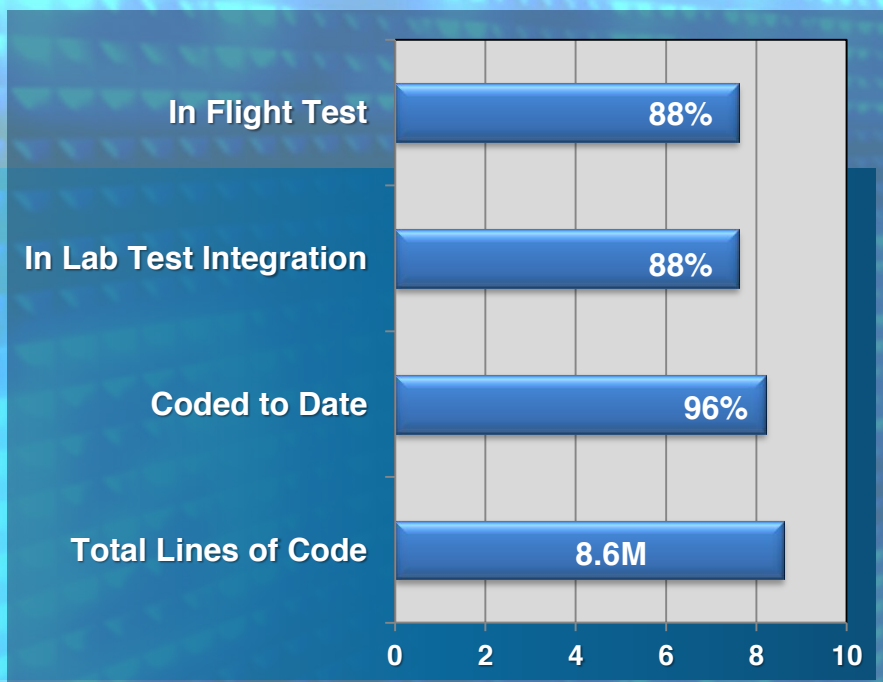
Emitter Locating



Airborne Software



As of 31 May 2013

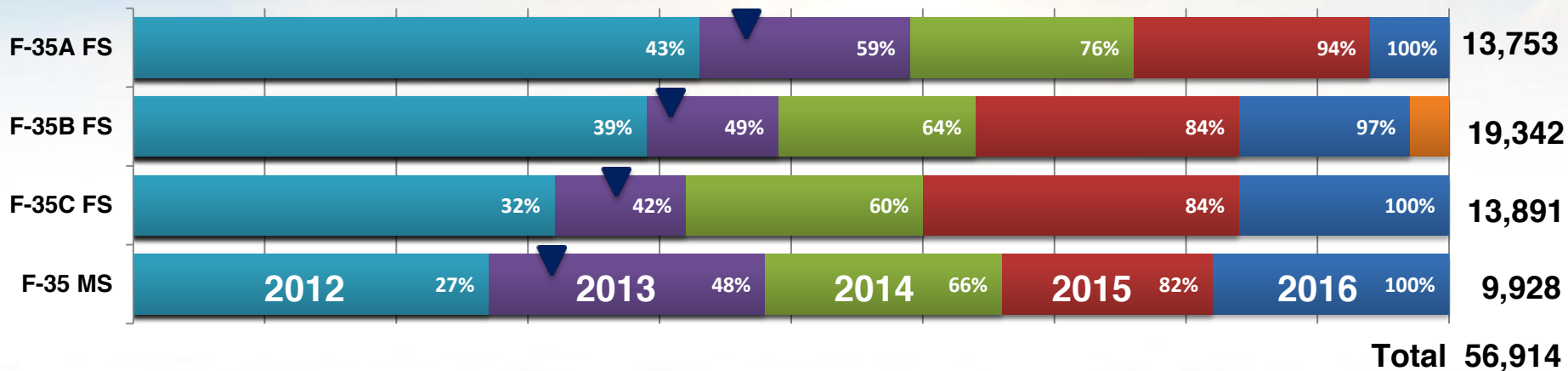


Block 2B Released – Flying on Aircraft Today



F-35 Test Progress

Flight Test Points

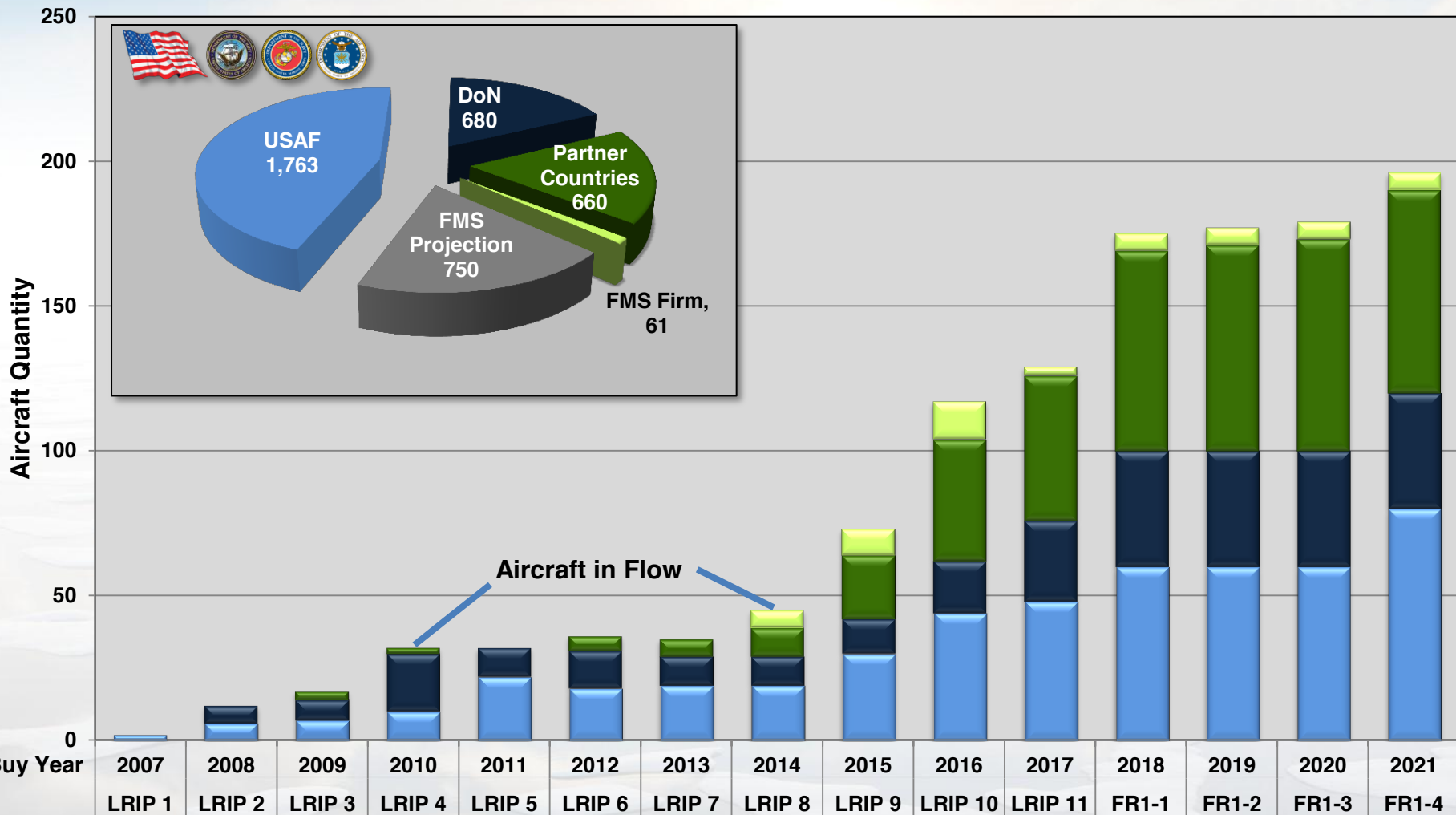


~50% Flight Test Completed by End of 2013

F-35 Production Plan



■ USAF ■ USDoN ■ International



F-35 Production Status

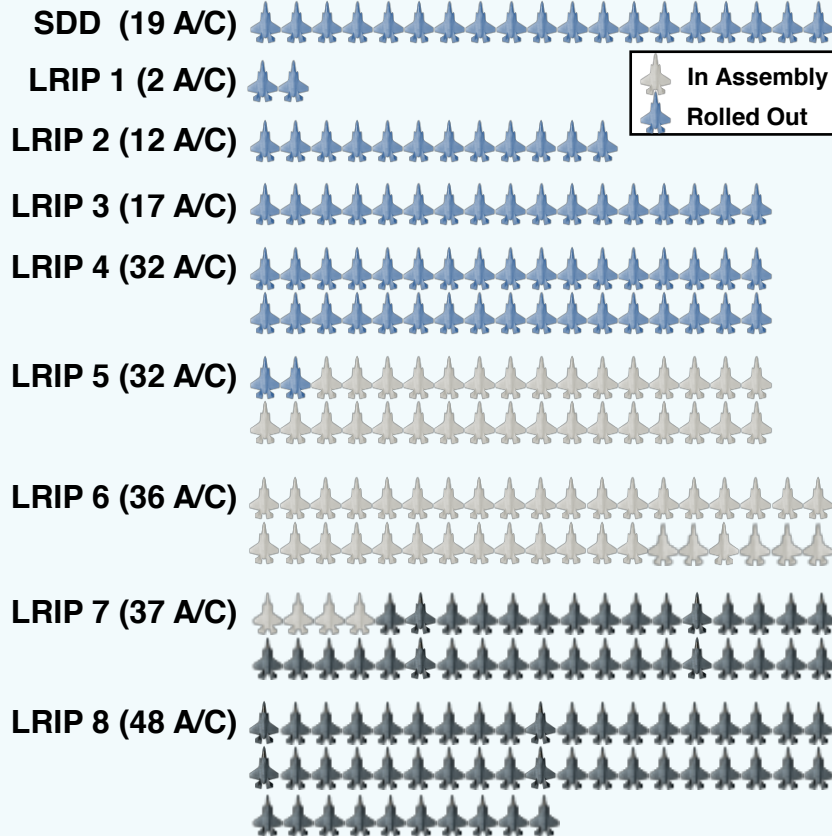


- 86 Aircraft Rolled Out
- 75 Aircraft Flying

Edwards AFB (12) (Ops/Test) **Nellis AFB (4) (Ops)** **PAX NAS (9) (Test)**

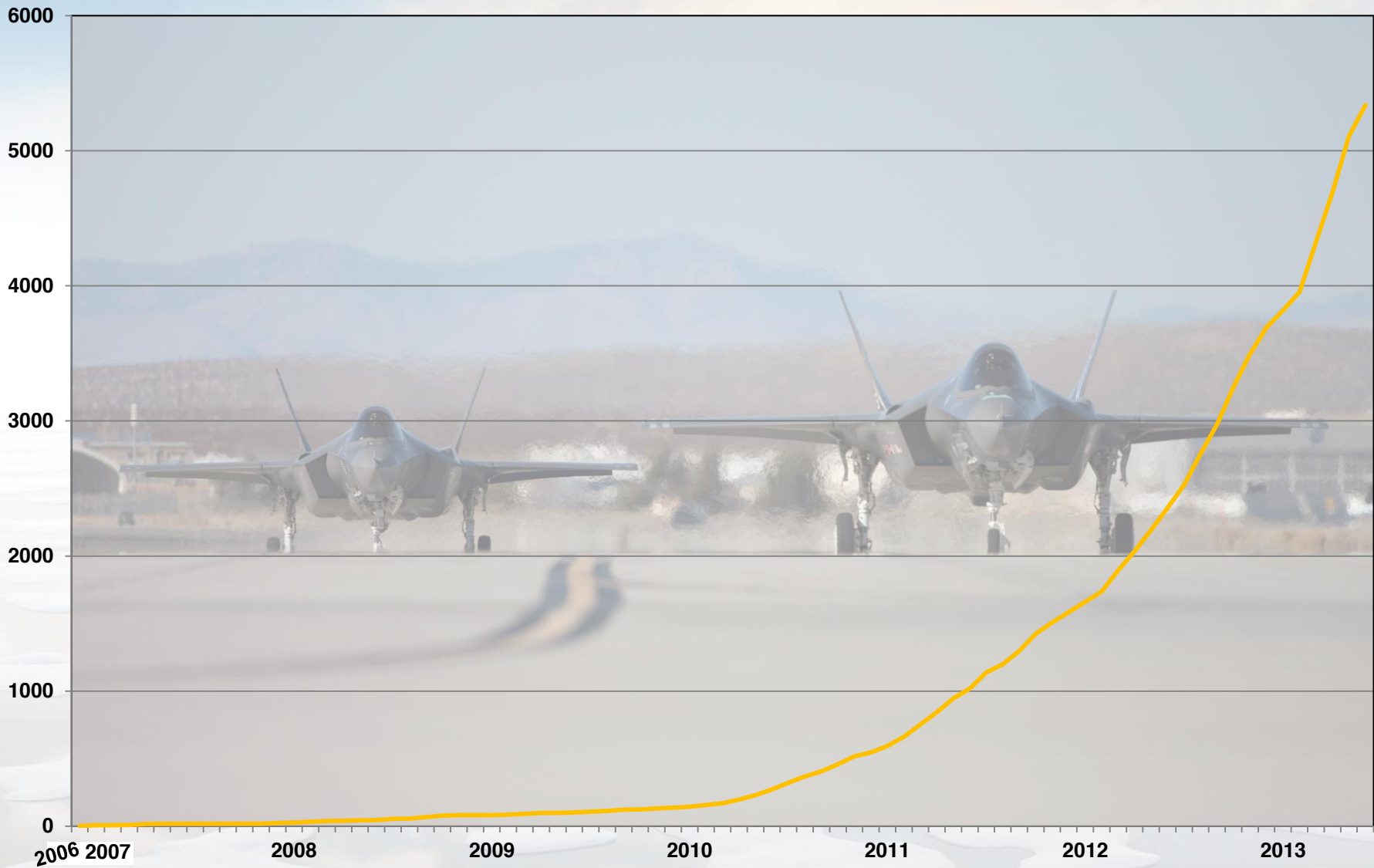


235 Aircraft Delivered/On Order



235 Aircraft Delivered or On Order

2006-2013 Cumulative Flights

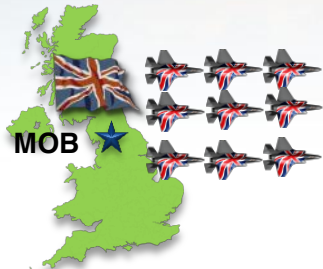


F-35 Deliveries Through 2018

As of 31 May 2013



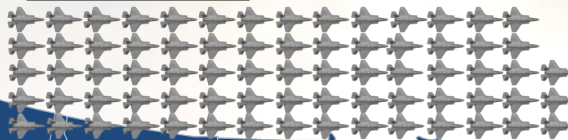
United Kingdom (9)



Nellis AFB (20)
(FDE/WIC)



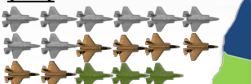
Air Force Ops 1 (73)



Navy Ops 1 (10)



Edwards AFB (23)
(OT)

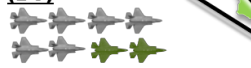


PAX NAS (9)
(Test)



U.S. Services	Partners	Sites	Aircraft
3	8	18	464

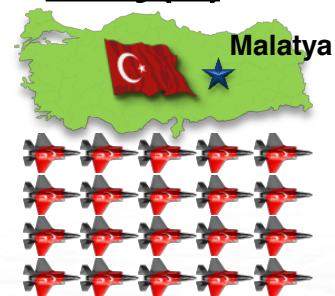
Edwards AFB (8)
(DT)



MCAS Iwakuni (16)
(Ops)



Turkey (20)



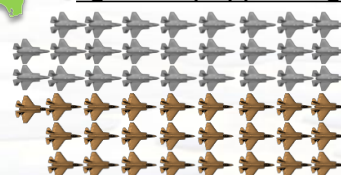
MCAS Yuma (23)
(Ops)



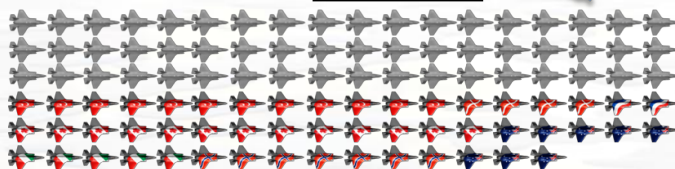
MCAS Beaufort (29)



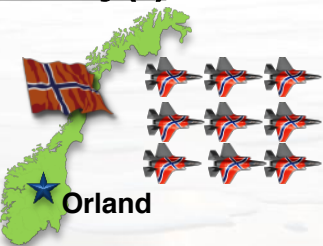
Eglin AFB (51) (Training)



Luke AFB (105)



Norway (9)



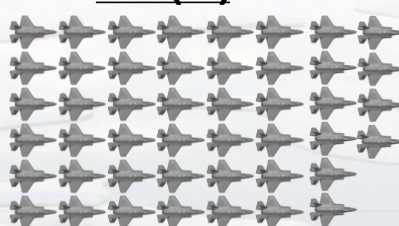
Italy (11)



Australia (2)



FMS (46)



Global Deployment

Program Building Momentum



- ✓ **Eight International Countries Under Contract**
- ✓ **Netherlands Votes Down Reevaluation in April**
- ✓ **Norway Announces Full Funding of Program in April**
- ✓ **Australia Reaffirms Commitment to 100 Aircraft in May**
- ✓ **Israel/Japan Under Contract**
 - Delivery in 2016
- ✓ **U.S. Services Announce F-35 IOC Dates**
 - F-35B Dec 2015 (USMC)
 - F-35A Dec 2016 (USAF)
 - F-35C Feb 2019 (USN)

Korea FX Selection Expected Soon

Canada Executing 7-Point Plan

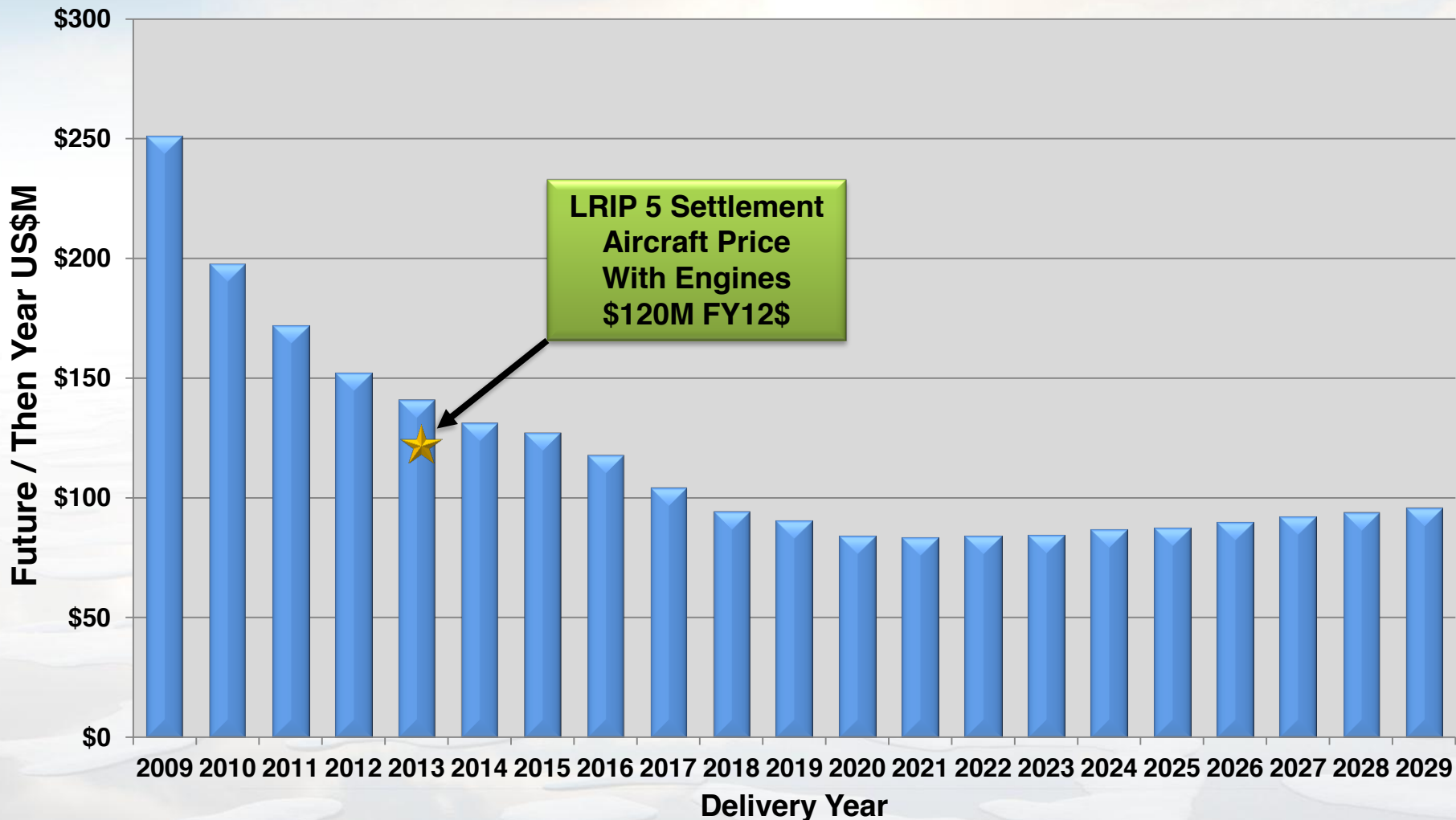


International Partners Supporting Program

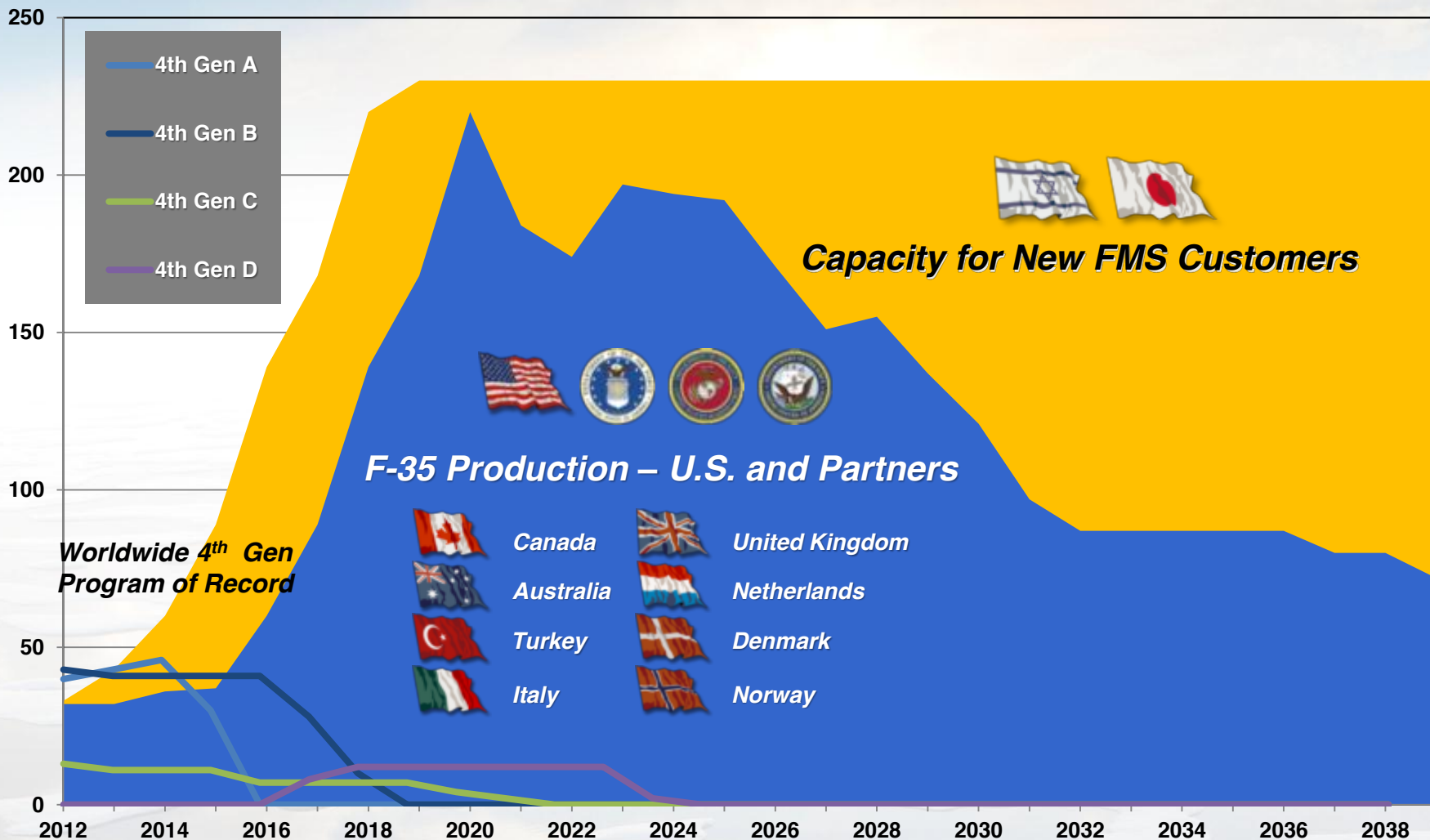
Current U.S. Gov't F-35A Price Estimate



Price Includes Aircraft, Mission Systems, Engine, and Concurrency

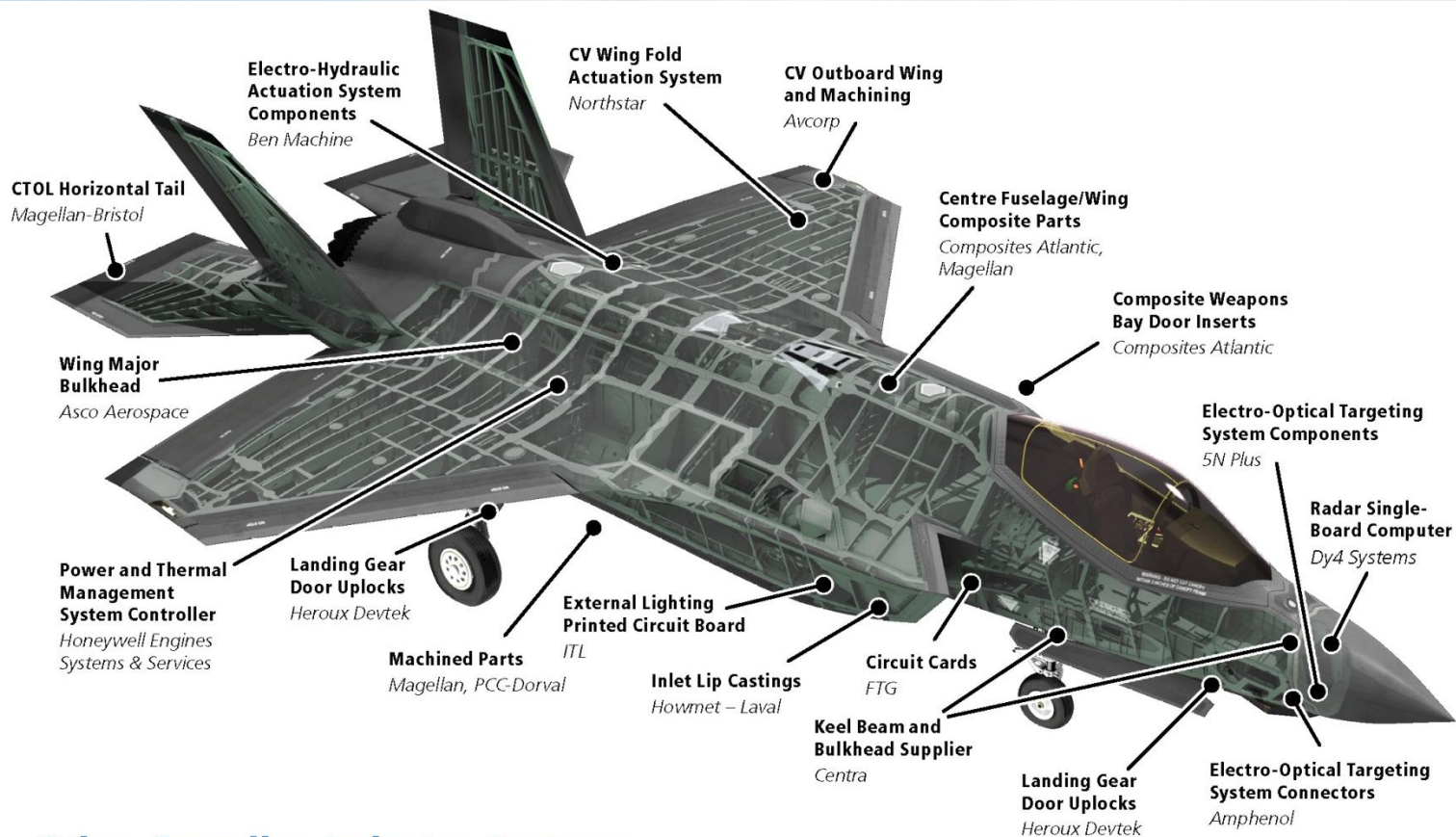


F-35 Production Growth vs. 4th-Gen



Enables Long Term Relevance and Savings

Canadian Industrial Participation



Other Canadian Industry Partners

Advanced Integration
Technology (AIT)
NGRAIN
Handling Specialty
Nikon Metrology
MXI Technologies
Nav-Aids

Pratt & Whitney-Canada
FAG
Magellan
Montreal Carbide
Univ. Quebec – AMIL
CaseBank Technologies
Cross Manufacturing

Celestica
Curtiss-Wright
Samuel
Novatronics
Excel Precision Machining
Alcoa Forged and Cast Products
Howmet – Laval

MDS
Kennametal Stellite
GasTOPS
Mindready Solutions
Xantrex

Questions



